REMARKS

Response to Rejection under 35 U.S.C. § 103

Claims 1, 3-7, 9, and 18 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Georger et al. (US 5,324,591) in view of Kobayashi et al. (US 6,294,313) and Singhvi et al. (US 5,776,748).

Georger and Singhvi are relied upon by the Examiner as summarized on pages 4-6 of Applicants' Remarks of February 22, 2010.

The Examiner further responds to Applicants' arguments of February 22, 2010 on pages 6-8 of the Office Action.

With respect to Applicants' position that Georger does not teach or suggest the step of transferring the pattern of cells formed on the UTF to a biological tissue, the Examiner acknowledges that Georger does not teach or disclose the recited "transferring" step. The Examiner alleges that Singhvi teaches a transfer step and that a person of ordinary skill in the art would have tried to transfer the patterned cells on UTF.

With respect to Applicants' position that a skilled artisan would not have combined Georger and Singhvi as suggested, the Examiner states that Singhvi teaches transferring cells grown on the primary plate to the secondary plate. The Examiner indicates that the transferring of Singhvi meets the claimed step even if the present claims do not require any selection of cells.

The Examiner maintains that the patterned cells on UTF of Georger can be transferred to the surface of a body implant in view of Singhvi. In this regard, the Examiner considers the UTF of Georger to be equivalent to the SAM of Singhvi. The Examiner cites Singhvi as teaching generating surfaces for tissue culture, creating artificial tissues for grafting or implantation, and

generating artificial tissues to adhere to the surfaces of prosthetic or implantable devices (col. 21, lines 10-22). The Examiner also cites Singhvi as teaching that patterned proteins may be transferred from the patterned plates by contacting the plates with other biophilic or bioadhesive substrate, and thus, the surfaces of prosthetic or implanted devices or tissue culture plates can be patterned with the patterned proteins (col. 20, lines 22-31).

The Examiner concludes that a skilled artisan would have tried to transfer the patterned cells on the UTF of Georger to the surfaces of prosthetic or implanted devices or tissue culture plates with a reasonable expectation of success.

The rejection should be withdrawn for the following reasons:

(1) Singhvi is not sufficient to make up the deficiency of Georger. The Examiner recognizes that Georger does not teach the claimed transferring step (see, Office Action, page 6). Singhvi is relied on as teaching a "transfer step" thereby allegedly curing the recognized deficiency of Georger.

However, Georger is not deficient for failing to teach or suggest merely a "transfer step." Claim 1 recites "transferring the adhered cells to a cell culture substrate *in the patterned state*." That is, Georger fails to teach or suggest "transferring the adhered cells…in the patterned state" and Singhvi does not cure this deficiency.

Significantly, Singhvi teaches retrieving (transferring) individual cells positioned on islands of specified coordinates. In view of such purpose, Singhvi necessarily does not teach transferring cells in a patterned state. Rather, Singhvi is directed to a device for adhering separate, individual cells in a specific and predetermined position (Abstract). The embodiment of Singhvi relied upon by the Examiner requires a specific special orientation of the primary plate, *e.g.*, a 10 x 10 array of 100 islands, for retrieving individual cells. The transfer of each cell

from the primary plate to the secondary plate in Singhvi is for the purpose of selecting such individual cells positioned on islands of specified coordinates (see, col. 17, ln. 48-49 and 53-57; col. 18, ln. 23-29). That is, the transfer step disclosed in Singhvi does not teach or suggest transferring cells in a patterned state.

Further, Singhvi does not teach or suggest transferring cells in a patterned state in view of the portions of columns 20 and 21 cited by the Examiner. Singhvi teaches transferring patterned proteins and using such patterned proteins to subsequently create patterns of cells. However, such disclosure does not meet the claimed feature of transferring cells in a patterned state.

For at least these reasons, reconsideration and withdrawal of the rejection are respectfully requested.

(2) A skilled artisan would not have modified the references as suggested by the Examiner. The transfer step disclosed in Singhvi is expressly applied to cells identifiably segregated on the islands of the primary plate (see, col. 17, ln. 48-49 and 53-57; col. 18, ln. 23-29). In contrast, Georger does not segregate individual cells on the patterned substrate (see, *e.g.*, Fig. 3A) and, instead, Georger is directed to the outgrowth of cells in a cell culture. A skilled artisan would readily appreciate the fundamental difference between outgrowth in a cell culture and segregation of individual cells. Accordingly, a skilled artisan would not have applied the transfer step of Singhvi to the patterned substrate of Georger.

For at least this separate reason, reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Jerrick J. Ho/

Jerrick J. Ho
Registration No. 63,763

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: September 21, 2010